



APPRAISAL BULLETIN

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RESIDENTIAL AND COMMERCIAL CONSTRUCTION COSTS



18-FAMILY BRICK APARTMENT

Content: 168,385 cubic feet
13,260 square feet

DESCRIPTIVE SPECIFICATIONS 18-FAMILY BRICK APARTMENT BUILDING

GENERAL CONDITIONS

Materials, Labor, Appliances. Unless otherwise specified herein, the contractor shall provide and pay for all materials, labor, water, tools, equipment, permits, light and power necessary for the completion of the Wenzlick 18-family apartment. Unless otherwise specified, all materials shall be sound, new and of good quality and all work shall be done in a skillful and workmanlike manner.

PREPARATION OF SITE AND EXCAVATION

The contractor shall clear the site of all trees, brush, etc., which come within the area of the proposed building. He shall carefully remove and stack on the plot the top soil for making the lawn.

Excavation shall be of sufficient area and depth to accommodate the building indicated; foundation walls shall be carefully backfilled. Any surplus material not required to grade the plot as designated by plans shall be removed from the premises. Any shortage of materials shall be furnished by the contractor.

Rock excavation is not included in this contract. The contractor will be paid an additional price per cubic foot for rock removal as specified in his bid.

Pumping of other than surface water is not included in the contract price. If

spring or other sub-surface water is encountered, the contractor will be paid an additional price per day for keeping the excavation free at the price quoted in his bid or agreed upon between the contractor and the owner.

CONCRETE FOOTINGS AND FOUNDATIONS

Footings and foundation walls shall be installed to dimensions indicated on the plans. The mixture shall be one (1) part Portland Cement, three (3) parts clean sharp sand, five (5) parts broken stone, trap-rock, gravel or other suitable clean coarse aggregate, graded in size to pass through a 2" screen, adequately mixed with a sufficient amount of clean water in a mechanical batch mixer, placed in the forms within one-half hour thereafter. Substantial and tight forms shall be built on both inner and outer surface foundations of the walls. No part of the excavation wall shall be used as a form.

FINISHED CEMENT WORK

The under-course of the basement floor shall be poured over a well-tamped 3" cinder bed and shall be composed of concrete as specified above, laid so that there is a gradual fall from the foundation to the basement sewer drain. This concrete is to be 3" thick, plus a finish coat of one (1) part Portland Cement and three (3) parts clean sharp sand to be applied to a thickness of not less than one-half inch on top of all concrete under-courses, finished smooth under a steel trowel. Concrete fill shall be provided for tile floors in the bathrooms.

BRICKWORK AND MASONRY ITEMS

Exterior walls are to be 13" variegated matt brick laid in Flemish bond backed with dobies and salmon brick. Rear walls of building are to be faced with common brick and the fire walls are to be made of salmon brick and dobies. The contractor shall provide all brickwork as specified on the plans, comprising a chimney as indicated. Flues are to be lined with terra cotta of the proper dimension. Average-grade cut stone sills are to be provided for windows on the front and side of the building and stone lintels are to be provided over the basement windows. Ornamental work and roof coping to be of terra cotta.

LATHING AND PLASTERING

Contractor shall provide for 3-coat plastering over rock lath (or expanded metal lath) secured to studs (or joints) at each intersection with blued lath nail, corner beads provided for all exterior angles. The scratch coat shall be one (1) part lime putty to two (2) parts sand, with proper proportions of fiber and sand added. The brown coat shall be one (1) part lime putty to three (3) parts sand. The finished coat shall be one (1) part dry gauged plaster to two (2) parts dry hydrated lime. First grade workmanship is required in the application of each plaster coat. No cornice or other ornamental plaster work is contemplated under this contract.

The basement ceiling shall be covered with two coats of plaster, including sand float finish coat.

TILING

This specification provides for tiling all bathrooms. Floors shall be prepared by the carpenter and mason, and walls by plaster contractor as specified above. The tile setter shall furnish and install 4-1/4 x 4-1/4 glazed commercial-grade wall tile with approved caps, cove bases, angles, finials, etc. Tile shall be

installed to a height of 3' 6" and to ceiling around bath tubs. Bathroom floors shall be 1" or 2" hexagonal white ceramic tile.

The contractor shall furnish all setting materials and on completion leave the entire work properly grouted and cleaned.

**ROUGH CARPENTRY
AND FRAMING MATERIAL**

for milling.

Rough carpentry and framing material shall be the best grade provided in local practice. It may be yellow pine, white pine, fir or hemlock. All material shall be of sizes indicated, with allowance

Floor Joists	2" x 12" - spaced 16" c to c
Ceiling Joists	2" x 8" - spaced 16" c to c
Roof Rafters	2" x 6" - spaced 16" c to c
Studding in interior partitions	2" x 4" - spaced 16" c to c

One line of cross bridging shall be provided for each floor span exceeding 10'. The entire structure shall be braced and trussed where necessary and securely nailed as required by best practice.

**UNDER FLOORING AND
ROOF SHEATHING**

6d nails.

Sheathing on roof and all sub-flooring shall be provided as indicated. Material shall be No. 2, dressed and not over 6" wide, laid diagonally for floors and each intersection well secured by two

ROOFING

one thickness of Celotex.

The mansard portion of the roof shall be a good grade of variegated slate. The flat portion of the roof is to be Certainteed built-up asphalt laid over

**FLASHING - SHEET
METAL WORK**

ly supported by approved hangers and straps.

Provide and install 16-ounce copper flashing for valleys and angles, chimney counter and step flashed. Provide gutters and downspouts of 16 ounces copper with necessary fittings, all securely

**MILLWORK - WINDOW
FRAMES AND SASH**

shall be 1-3/8" thick, check-rail type. Exterior door frames shall be 2" clear pine rabbeted to receive 1-3/4" stock doors.

Stock window frames and sash shall be provided of the sizes shown on the plans. These shall be double-hung type as indicated and sash shall be glazed with single-strength clear glass. The sash

MILLWORK - INTERIOR

All stock trim necessary to complete the various parts of the work indicated shall be provided. All casings, base, trim, stools and moulding shall be of yellow pine of the best quality and of approved design as carried in local stock. Exterior doors shall be clear pine 1-3/4" thick of the size shown on the plans as

selected from local catalog stock. Interior doors shall be of clear pine, six panel colonial design 1-3/8" thick of the size indicated on the plans selected from local catalog stock.

FINISHED FLOORS

Finished floors shall be of clear plain red oak 2-1/4" x 13/16", to be placed over all floor areas on the first, second and third floors, except the baths. Flooring shall be laid tight and even and nailed every 16". All oak flooring shall be scraped or sanded and completed ready for the painters. Before placing finished flooring all sub-flooring shall be covered with one course of building paper.

BUILT-IN CABINETS

Built-in kitchen cabinets shall be provided as indicated on the detail plans.

ENTRANCE HALLS AND STAIRS

All interior stairs are to be metal with terrazzo treads and risers. The interior walls of the entrance halls are to have claytile wainscoting. The remainder of the walls and ceilings are to be plastered. The floors and stair landings are to be of terrazzo.

Each entrance hall shall be equipped with a 6-receptacle "Keilson" government-approved apartment house mail box; finish to be "sprayed brass."

REAR PORCHES AND STAIRS

these entrances are to be furnished with concrete steps.

PAINTING

Immediately upon completion of all exterior and interior woodwork the painter shall apply a priming coat consisting of white lead, pure linseed oil and turpentine in the proportions considered best in local practice. Upon completion of the priming coat, all nail holes and other imperfections in the work shall be stopped and filled with white lead putty. Before priming, knots and shakes shall be stopped with one coat of pure orange shellac. Second and third coats shall be mixed and applied in the color selected. Painters may mix at the job all white lead and oil paint in the proportions customary in the locality, using paste, white lead, pure linseed oil, turpentine and dryer, mixed in such proportions as to weigh not less than 15 lbs. per gallon. Painter may use the best qualities of approved ready-mixed paints. Each can must bear the formula of its contents. Materials shall be used direct from this original package and in accordance with the manufacturer's directions. (This contract does not contemplate the painting or decoration of plastered walls and ceilings.) Painter shall oil-stain oak floors in shade selected and fill with an approved paste filler. Floors shall then be finished with three coats of white shellac.

PLUMBING ment.

This specification contemplates a complete plumbing, drainage and water-supply system for 18 bathrooms, 18 kitchens and 9 laundry trays in base-

Sewer Line, Vents and Drainage. House sewer line of 6" shall be carried to a point 50 feet beyond foundation walls. Vent and drainage system shall be installed and tested in accordance with best local practice, municipal code, or requirements of American Society of Sanitary Engineers. All joints shall be filled with oakum and poured lead and well calked. 2" vent and waste lines shall be of genuine galvanized wrought iron. 6" vitrified tile pipe shall be continued beyond the foundation walls for 50 feet and the joints securely set with cement mortar. Plumber shall excavate and backfill all pipe trenches.

Water Supply. A pipe shall be continued 50 feet beyond the foundation walls in separate trench. This shall be laid using 1" copper water tubing with sweat-joint fittings. One-half inch copper tubing with sweat-joint pipe and fitting shall be installed for hot and cold water supply and connected with all plumbing fixtures and boiler. (Water closets and boiler shall be provided with cold-water supply only.) All pipe and fitting shall be installed in accordance with manufacturer's instructions.

Fixtures. There shall be furnished and installed to the rough connections here provided fixtures of quality equal to those specified in the following list: (The following list covers items manufactured by the Independent Plumbing and Heating Company. Contractor is permitted to substitute any equal combination.)

- 18 - 60" Queen Sinks #457
- 18 - Knight Pedestal Lavatories 20" x 24" over all #224
- 18 - Colonial Vitreous China Toilets with white ivoryette seat #344
- 18 - 60" bath tubs #123

Hot Water Supply. An indirect water heater (Sims, Allberger, Fre-Flo or equal) is to be provided under these specifications. Heater must be capable of providing ample supply of hot water (100 degree Fahrenheit temperature rise) with normal boiler operation.

Alternates. If local building codes and practice do not permit the use of copper tubing and sweat-joint fittings for water supply, the contractor shall furnish genuine wrought-iron galvanized pipe in place thereof. However, where substitution is made, pipe one size larger than specified shall be provided.

HEATING PLANT

The purpose of this specification is to describe complete installation of the 1-pipe vacuum heating plant. All pipes shall be genuine wrought iron, installed in sizes, pitch and direction as indicated on the heating plans and instructions provided by the manufacturer furnishing the vacuum system accessories.

Radiation furnished by this contract consists of a total of 2200 square feet concealed steam radiation. The boiler shall be of capacity and design equal to Kewanee Boiler No. 4K, complete including insulating jackets, standard fittings and tools.

The contractor shall guarantee the heating plant to heat the entire first, second and third floors of the building to 70 degrees Fahrenheit when the outside temperature is at Zero Fahrenheit and wind velocity is not in excess of 30 miles per hour.

TYPICAL FLOOR PLAN
EIGHTEEN - FAMILY APARTMENT



This should be accomplished with not more than a 2-pound gauge pressure at the boiler, or with the vacuum at the height specified by the manufacturer of the vacuum system accessories. The plant shall be tested as required and left complete.

Covering - Pipe and Boiler Jacket. The boiler shall have standard insulated jacket as regularly furnished by manufacturer, lined with not less than 1" thickness of asbestos sheet insulation, and 4" asbestos fill shall be placed on floor within jacket. All exposed supply pipes in the cellar and within building walls shall be covered with approved 2" air-cel asbestos covering. All exposed covering shall be banded at the joints with brass strapping.

Painting. All exposed pipes in the basement as well as any exposed unfinished cast-iron parts of the boiler shall receive two coats of approved smoke-stack black. All radiators, and any exposed pipes above the first floor level shall be thoroughly cleaned and receive two coats of approved heat-resisting radiator paint in color selected.

ELECTRIC WIRING

It is the purpose of this specification to describe a complete electrical installation. All material shall be of standard make and of quality and installed as required by the National Board of Fire Underwriters. All outlets shall terminate in approved metal boxes. Switches shall be of toggle type. All outlets other than for lighting fixtures and switches shall be equipped with standard duplex connections. Wiring to outlets shall be of approved-size BX cable of sufficient size to carry the circuit load.

Each circuit shall be switched and fused and extended to a central panel board. This contractor shall terminate all circuits at an appropriate meter and fuse board.

Connection from meter panel to public service lines is not included in this contract, nor are electrical fixtures and appliances provided.

MECHANICAL EQUIPMENT

Each apartment is to be equipped with one 4-burner side oven gas stove with automatic oven regulator; one 6-cubic-foot electric refrigerator; and one In-a-Door or Roll-Away bed. The building is to be provided with 3 Kerner incinerators, each incinerator to have a refuse door installed in the wall of the building at the proper height above the first, second and third floor service stair landings.

CORRECTION OF PREVIOUSLY GIVEN SPECIFICATIONS

ALL OAK FLOORING THAT HAS BEEN PREVIOUSLY SPECIFIED FOR THE BUILDINGS IN THE AUGUST AND SEPTEMBER 1950 APPRAISAL BULLETINS SHOULD READ: "CLEAR PLAIN RED OAK."

BUILDING COSTS OF AN EIGHTEEN-FAMILY BRICK APARTMENT HOUSE BUILT IN SAINT LOUIS

MATERIAL

- Cost of face brick, salient brick, hollow brick, quarry tile, terra cotta, cut stone and building stone.
- Cost of all materials going into mortar, concrete, cement and plaster.
- Cost of all lumber, flooring, millwork, roofing and paneling.
- Cost of all materials for plumbing, heating, electrical work, sheet metal work, iron work, hardware, marble, tiling, vibrato and special equipment.
- TOTAL MATERIAL COST**

LABOR

- Cost of setting all stone, tile, marble and vibrato, laying brick and paving concrete.
- Cost of labor on lathing and plastering.
- Cost of carpentry, roofing, shingling, painting, decoupling, and builder's general supervision.
- Cost of installing plumbing material and fixtures, wiring, heating plant and sheet metal work.
- Cost of excavation and grading.
- TOTAL LABOR COST**

OVERHEAD

- TOTAL OVERHEAD COST**. This item includes cost of all city permits, city insurance and utility connection costs, cost of financing, insurance during construction, insurance and taxes on construction on the building only, and estimated profit made by the builder.

TOTAL COST OF CONSTRUCTION

	1	2	3	4	5	6	7	8	9	10	11	12	13	Cr. R. cost	Rg. R. cost
Year	\$ 3004	\$1056	\$ 7440	\$ 7736	\$20836	\$ 2680	\$3640	\$ 4601	\$1476	\$1062	\$13300	\$ 6543	\$ 40878	\$ 3,06	
1913	3944	1064	7444	7503	20575	3620	2650	4451	1478	1062	13459	6493	40527	24.1	
1914	3910	1069	7452	7518	20600	3580	2650	4681	1542	1062	13495	6529	40843	3.06	
1915	4319	1044	7935	23823	20465	3740	2650	4892	1802	13744	7141	44708	26.6		
1916	4568	2346	8953	15546	6147	2710	5053	1697	1110	14077	8214	51598	20.6		
1917	5707	2798	12200	13143	33838	4243	2800	5437	1717	1110	15207	9141	58286	34.6	
1918	5748	3346	13995	18646	56655	4738	3008	5843	1794	1332	16895	9017	63297	37.6	
1919	5748	4057	17795	18770	44558	4876	3159	6259	1836	1822	18568	11795	74795	44.6	
1920	6240	3606	12297	11862	34284	4850	3300	8430	2082	1322	20214	10338	64816	5.60	
1921	6540	3162	12562	11180	33768	4940	3600	7817	2216	1600	19990	10100	63805	37.6	
1922	6795	3162	12562	11180	33768	5194	2400	8605	2464	1801	21604	10674	66488	40.7	
1923	7217	3362	13435	12176	36210	6450	4150	10221	2631	1891	25982	11966	74795	44.6	
1924	7340	3502	12090	14520	37437	6980	4150	10221	2631	1891	25953	12721	76486	47.0	
1925	7118	11875	18333	18333	40517	65454	10311	2538	1891	25984	12320	8534	5.90		
1926	8249	3024	11038	14460	39462	6614	3650	10244	2505	1891	24894	13228	76478	5.77	
1927	8249	3061	10640	18986	38346	5990	1580	5080	2040	1100	13770	7943	49101	3.70	
1928	6119	2820	10271	17010	36220	6394	2320	10344	2560	1891	24470	11629	72320	43.0	
1929	5784	3759	10815	13937	35955	5970	2350	10284	2551	1946	23771	3707	71713	42.0	
1930	5689	2559	9194	13577	33019	5673	2359	9010	2344	1773	21159	10488	64848	6.00	
1931	5324	2340	8047	13797	28479	5120	1950	7438	2534	1332	18364	9390	57302	34.0	
1932	4763	2422	7445	13412	4358	4326	1625	6467	2100	1175	15625	8383	510950	50.2	
1933	5520	2448	8830	10530	27348	3990	1580	5080	2040	1100	13770	7943	49101	3.70	
1934	5080	2880	11820	12325	32685	3980	1580	5080	2040	1100	13770	7942	55197	4.16	
1935	5080	2835	10775	13980	32470	5150	1960	6320	2040	1245	16735	9113	58388	34.7	
1936	5325	2550	10460	13580	32435	5510	2345	7400	2440	1580	18773	9490	60139	5.50	
1937	6210	10860	13410	33090	5420	2380	9400	1875	1580	18955	10687	633952	37.4		
1938	6200	2815	10460	13940	37945	5125	2010	7305	1875	1245	19855	9867	61982	30.7	
1939	5410	2560	10460	13930	31430	5040	1810	6580	1875	1245	19840	9343	57123	33.9	
Ja 1940	5669	2560	10700	12720	31869	6210	2930	7840	1875	1580	20255	9939	61983	36.7	
Ap 1940	5550	2560	11040	12890	32040	6210	2930	7840	1875	1580	20255	10022	60267	4.60	
Jl 1940	5550	2560	11040	12880	32040	6310	2830	7145	1860	1940	19845	9813	61818	36.7	
O 1940	5550	2610	13150	12680	34200	5880	2830	7305	1880	1940	19873	10267	64142	38.1	

Ja 1941	5810	2635	13150	13130	24725	6770	3210	8320	1890	2045	22235	11463	68423	40.6	5.16
Ap 1941	5790	2625	13590	13130	34145	6650	3115	8915	1890	2130	22300	10700	87145	39.9	5.06
J1 1941	5910	2720	13860	13130	35615	6910	3190	9490	1890	2130	23610	11171	70421	41.5	5.31
O 1941	5940	2750	14160	14010	38880	7730	3240	10180	2180	2130	25450	11886	73988	43.9	5.58
Ja 1942	5940	2750	13510	13050	37550	7870	3290	10550	2180	2300	28080	11880	73200	44.7	5.87
Ap 1942	6410	2785	12860	16640	39715	7870	3290	10550	2180	2200	26280	12305	78300	46.5	5.89
J1 1942	6410	2785	12860	16640	39715	7870	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
O 1942	6410	2785	13880	16640	39715	7100	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
Ja 1943	6410	2785	13860	16640	39715	7100	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
Ap 1943	6410	2785	13860	16640	39715	7100	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
J1 1943	6410	2785	13860	16640	39715	7100	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
O 1943	6410	2785	13860	16640	39715	7100	3250	9490	1890	2130	23880	11899	75474	44.8	5.89
Ja 1943	6410	2805	13480	16640	41255	8710	3137	8820	1890	2130	22687	11702	75984	45.1	5.73
Ap 1943	6410	2805	13480	16640	41255	8710	3137	8820	1890	2130	22687	11702	75984	45.1	5.73
J1 1944	6410	2825	11900	16640	41785	8710	3137	8820	1890	2130	22897	12040	79531	45.4	5.77
Ap 1944	6410	2825	16470	16640	42355	8710	3137	8820	1890	2130	22897	12146	77100	45.8	5.82
J1 1944	6410	2825	16630	16640	42355	8710	3137	8820	1890	2130	22897	12146	77100	45.8	5.84
O 1944	6720	2805	16630	16640	42355	7200	3137	8820	1890	2130	24137	12476	79900	47.2	6.00
Ja 1945	6805	2805	17290	16640	43860	7460	3137	9030	1890	2300	23697	12771	81004	46.4	6.15
Ap 1945	6805	2805	17290	16640	43860	7460	3137	9030	1890	2300	23697	12771	81004	46.4	6.15
J1 1945	6805	2815	17290	16640	43860	7500	3000	10800	2300	2300	27080	12629	83200	49.5	6.29
O 1945	7155	2880	17290	17010	44345	10100	4460	14150	2860	3455	35145	14575	94865	55.9	7.09
Ja 1946	7155	3005	17280	17010	44370	10100	4480	14150	2860	3455	35145	14579	94864	55.9	7.10
Ap 1946	7155	3005	17280	17010	44370	10100	4480	14150	2860	3455	35145	14579	94864	55.9	7.10
J1 1946	7155	3005	17280	17010	44370	10100	4480	14150	2860	3455	35145	14579	94864	55.9	7.10
O 1946	8145	3110	17960	18930	47785	10890	4800	15110	2960	3455	37215	15915	100596	59.7	7.99
O 1946	8145	3275	18390	20200	50010	10890	4880	15110	3132	3455	37377	15946	81530	60.4	8.15
Za 1947	7315	3765	27580	21510	60150	12400	9780	16200	3860	41660	43680	120390	121917	72.4	9.15
Ap 1947	7700	3765	28800	21400	61465	12400	9780	16200	3860	41660	43684	120390	121917	72.4	9.15
J1 1947	7700	3805	23250	21400	56155	12400	9780	16200	3860	41660	43684	120277	118030	70.1	8.80
O 1947	8340	3920	28600	22300	66170	12400	9780	16200	3860	41660	43684	121263	121263	72.0	9.15
Za 1948	8340	4060	21450	32390	63070	13860	6200	14800	3870	41550	43520	139550	137940	75.9	9.64
Ap 1948	8820	4280	21580	27810	66320	13960	6200	14800	3870	41550	43520	139550	134650	79.8	10.11
J1 1948	8900	4270	28160	29100	70470	14620	8775	18100	41550	47995	47995	21110	139575	82.0	10.52
O 1948	9025	4305	28250	31250	72010	14620	8775	18100	4230	4950	47995	21002	143497	84.6	10.74
Za 1949	8500	4440	28400	30300	73240	14620	8775	18100	4230	4950	47995	21047	143182	85.0	10.80
Ap 1949	8500	4440	27200	30000	70940	14850	6320	18200	4325	4850	48355	21460	142725	84.8	10.76
J1 1949	8500	4440	27230	30000	71190	14850	6320	18200	4325	4850	48355	21460	142725	82.5	10.60
O 1949	8900	4440	27110	30150	89340	14850	6320	18200	4325	4850	48355	21460	142725	82.7	10.63
Za 1950	8900	4440	28250	28150	70310	14850	6320	18200	4325	4850	48355	21460	142725	82.4	10.46
Ap 1950	8900	4460	28250	28150	70310	14850	6320	18200	4325	4850	48355	21460	142725	82.0	10.50
J1 1950	8900	4460	29370	29134	19430	14850	6435	19200	4325	4950	50370	22710	147722	87.4	11.10
O 1950	10470	4680	33098	29378	77635	14850	6435	19200	4325	4950	50370	23191	151106	89.8	11.40



**30-UNIT REINFORCED
CONCRETE APARTMENT**
Content: 303, 534 cubic feet
21, 372 square feet

**DESCRIPTIVE SPECIFICATIONS
30-FAMILY FIREPROOF APARTMENT BUILDING**

GENERAL CONDITIONS - Same as 18-family brick apartment house.

PREPARATION OF SITE AND EXCAVATION - Same as 18-family brick apartment house.

**CONCRETE FOOTINGS,
FOUNDATIONS, COLUMNS,
BEAMS AND FLOORS**

Footings and foundation walls shall be installed to dimensions indicated on the plans. The mixture shall be one (1) part Portland Cement, three (3) parts clean sharp sand, five (5) parts broken stone, trap-rock, gravel or other suitable clean coarse aggregate, graded in size to pass through a 2" screen, adequately mixed with a sufficient amount of clean water in a mechanical batch mixer, placed in the forms within one-half hour thereafter. Substantial and tight forms shall be built on both inner and outer surface foundations of the walls. No part of the excavation wall shall be used as a form.

The columns, beams and floors shall be of reinforced concrete, 1:2:4 mix; columns and beams are to be provided and reinforced as indicated by the structural detail plans.

FINISHED CEMENT WORK - Same as 18-family brick apartment house.

**BRICKWORK AND
MASONRY ITEMS**

The exterior (curtain) walls are to be of 13" matt brick, laid in Flemish bond, and backed with dobies. The rear walls of the building are to be faced with common brick. The contractor shall provide all brickwork as specified on the plans, comprising a chimney as indicated. Flues are to be lined with terra cotta of the proper dimension. Average-grade stone sills are to be provided for windows on the front and sides of the building. Ornamental work and roof coping to be of terra cotta.

Interior partitions are to be of 4" gypsum block.

LATHING AND PLASTERING Contractor shall provide for 3-coat plastering over the 4" gypsum block. The finished coat shall be one (1) part dry gauged plaster to two (2) parts dry hydrated lime. First grade workmanship is required in the application of each plaster coat. No cornice or other ornamental plaster work is contemplated under this contract.

TILING - Same as 18-family brick apartment house.

ROUGH CARPENTRY AND FRAMING MATERIAL Rough carpentry and framing material (comprising only the roof rafters in the roof towers) shall be the best grade provided by local practice. It may be yellow pine, white pine, fir or hemlock. These roof rafters are to be 2 x 6's spaced 16" c to c.

These rafters are to be covered by No. 2 sheathing not over 6" wide, and well secured at each intersection by two 6d nails.

ROOFING The flat portion of the roof is to be built-up asphalt over a 1" layer of Celotex laid over a 3" reinforced roof slab.

FLASHING - SHEET METAL WORK - Same as 18-family brick apartment house.

MILLWORK - WINDOW FRAMES AND SASH - Same as 18-family brick apartment house.

MILLWORK - INTERIOR - Same as 18-family brick apartment house

FINISHED FLOORS Finished floors shall be of clear plain red oak 2-1/4" x 13/16", laid on wood screeds set in concrete. Flooring shall be laid tight and even and nailed every 16". All oak flooring shall be scraped or sanded and completed ready for the painters.

BUILT-IN CABINETS Built-in kitchen cabinets shall be provided as indicated on the detailed plans.

ENTRANCE HALLS AND STAIRS - Same as 18-family brick apartment house.

REAR PORCHES AND STAIRS Rear porches and stairs are to be made of structural steel with concrete floors, sizes as indicated on the plans. There are to be 5 entrances to the basement of the building and these entrances are to be furnished with concrete steps.

PAINTING - Same as 18-family brick apartment house.

PLUMBING This specification contemplates a complete plumbing, drainage and water-supply system for 30 bathrooms, 30 kitchens, and for 15 laundry trays in
(cont. on page 538)

BUILDING COSTS OF A THIRTY-FAMILY REINFORCED CONCRETE APARTMENT HOUSE BUILT IN SAINT LOUIS

MATERIAL

1. Cost of face brick, batons, fire brick, terra cotta, cut stone, marble and tile.
2. Cost of concrete, claytile and reinforcing.
3. Cost of all plastering materials.
4. Cost of all lumber, doors, millwork, roofing, panel, etc.
5. Cost of all materials for plumbing, heating, electrical work, sheet metal work, iron work, hardware and special equipment.
6. TOTAL MATERIAL COST.

LABOR

7. Cost of setting all stone, tile and marble and laying all brick.
8. Cost of carpentry, roofline, stoniting, painting, decorating, and builder's general supervision.
9. Cost of labor on plastering.
10. Cost of installing plumbing material and fixtures, wiring, heating plant and sheet metal work.
11. Cost of excavation and miscellaneous.
12. TOTAL LABOR COST.

OVERHEAD

13. TOTAL OVERHEAD COST. This item includes cost of all city services, utility connection costs, plans and engineering fees, cost of labor not during construction and taxes and insurance, and estimated profit made by the builder - 1%.

14. TOTAL COST OF CONSTRUCTION.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Cr. B. cost	Sq. ft. cost
1913 \$10,584	\$ 9,977	\$ 3,643	\$12,527	\$14,915	\$47,525		\$ 7,987	\$ 7,317	\$ 4,630	\$ 3,387	\$1,800	\$27,101		\$ 9,980	\$ 14,364	
1914 10,694	9,427	3,641	12,689	12,985	46,847		7,987	7,377	4,630	5,387	1,600	27,161		8,200	13,164	
1915 10,394	8,887	3,642	12,660	12,960	47,022		7,987	7,377	4,630	5,387	1,600	27,161		8,200	13,164	
1916 12,184	7,980	3,847	13,336	13,384	34,793		8,307	7,226	4,860	5,777	1,800	28,000		10,918	12,710	
1917 13,534	10,693	4,025	14,100	23,367	64,219		8,417	7,953	4,860	5,954	1,800	30,104		12,543	13,600	
1918 15,726	10,157	5,396	19,330	25,874	70,581		8,526	8,600	5,020	6,084	1,800	31,173		12,822	15,000	
1919 19,574	11,385	6,014	22,048	26,879	84,898		10,889	9,230	6,230	1,280	3,704	15,033		13,435	14,000	
1920 24,210	15,110	7,948	27,558	30,508	105,434		10,361	13,261	5,680	7,414	2,710	34,020		16,203	15,4	
1921 20,193	11,220	6,890	19,912	24,134	62,340		11,101	13,483	5,450	7,527	2,710	47,271		15,958	15,578	
1922 35,281	10,010	6,359	20,818	23,483	61,123		11,034	12,528	5,560	5,944	2,710	49,064		12,627	15,7	
1923 32,230	11,093	6,355	21,965	23,115	65,315		11,833	13,694	5,560	5,944	2,710	49,064		14,967	15,78	
1924 33,130	10,955	6,720	19,885	24,282	65,383		14,538	16,213	6,560	10,047	3,280	51,054		12,154	15,80	
1925 23,210	10,785	6,978	19,265	20,694	69,376		19,835	20,320	6,310	9,497	3,280	51,970		16,623	15,9	
1926 21,046	10,240	6,020	18,192	30,475	65,982		15,163	18,440	6,100	9,200	3,280	50,287		15,202	15,9	
1927 20,231	10,020	6,076	16,494	28,396	61,819		14,895	18,380	6,000	9,083	3,280	49,177		16,607	15,98	
1928 19,754	10,020	6,863	16,227	28,960	79,829		14,474	18,380	6,000	9,315	3,280	49,286		17,347	14,545	
1929 19,120	10,160	5,631	17,067	28,385	80,383		13,588	16,482	5,720	8,074	4,711	47,917		18,879	15,259	
1930 18,630	9,930	5,972	14,737	26,489	74,791		13,460	15,538	5,437	8,200	3,180	43,990		16,108	13,495	
1931 18,496	7,620	5,718	12,947	34,044	66,897		11,800	11,841	3,980	9,285	3,270	39,054		14,978	13,531	
1932 14,116	6,011	6,776	11,813	31,354	61,394		9,819	10,080	3,270	7,826	3,080	33,085		13,075	12,554	
1933 18,180	6,050	5,370	15,920	21,920	63,900		8,160	8,010	3,000	7,480	1,070	20,450		11,222	11,17	
1934 19,969	6,000	19,890	31,100	76,000			9,180	9,010	3,000	7,480	1,070	20,450		12,222	11,71	
1935 19,980	6,456	18,400	22,130	70,316			11,880	9,980	3,000	7,480	1,070	20,450		12,222	11,71	
1936 19,480	9,180	5,700	17,600	23,250	75,210		12,700	11,650	4,360	7,460	3,815	34,925		18,531	13,664	
1937 20,400	9,500	5,845	20,900	23,900	79,635		13,360	12,880	4,145	6,685	3,815	39,025		20,900	14,260	
1938 18,420	5,670	17,770	23,420	73,870			11,750	11,100	3,000	6,250	3,000	18,778		12,863	14,4	
1939 18,600	9,180	5,780	17,680	21,720	74,950		13,620	11,825	5,180	6,100	2,720	36,455		12,685	14,5	
Ja 1940 18,370	9,280	5,810	18,850	21,750	74,300		13,340	11,360	5,340	6,100	2,815	38,948		20,820	13,624	
Ap 1940 18,110	9,220	5,810	18,630	21,980	73,750		13,340	11,200	5,340	6,100	2,815	38,948		20,787	13,512	
Jl 1940 18,110	9,180	5,810	18,860	21,980	73,920		14,590	11,200	5,340	6,000	2,815	41,065		21,221	13,236	
O 1940 9,150	8,030	22,410	21,980	77,980			13,700	11,520	5,650	6,910	2,815	40,589		120,810	21,641	

(cont. from page 535)

the basement.

Sewer Line, Vents and Drainage. Same as 18-family brick apartment house.

Water Supply. Same as 18-family brick apartment house.

Fixtures. There shall be furnished and installed to the rough connections here provided fixtures of equal quality to those specified in the following list: (The following list covers items manufactured by the Independent Plumbing and Heating Company. Contractor is permitted to substitute any equal combination.)

- 30 - 60" Queen Sinks #457
- 30 - Knight Pedestal Lavatories 20" x 24" over all #224
- 30 - Colonial Vitreous China Toilets with white ivoryette seat #344
- 30 - 60" Bath Tubs #123

Hot Water Supply. Same as 18-family brick apartment house.

Alternates. Same as 18-family brick apartment house.

HEATING PLANT

The purpose of this specification is to describe complete installation of the 2-pipe steam heating plant. All pipes shall be of genuine wrought iron installed in sizes, pitch and direction as indicated on the heating plans and instructions provided by the manufacturer furnishing the vacuum system accessories.

Radiation furnished by this contract is to consist of a total of 4000 square feet concealed steam radiation. The boiler shall be of capacity and design equal to Kewanee boiler #10K, and is to be complete including insulating jackets, standard fittings and tools.

The contractor shall guarantee the heating plant to heat the entire first, second and third floors of the building to 70 degrees Fahrenheit when the outside temperature is at Zero Fahrenheit and wind velocity is not in excess of 30 miles per hour. This should be accomplished by not more than 2-lb. gauge pressure at the boiler. The plant shall be tested as required and left complete.

Covering - Pipe and Boiler Jacket. Same as 18-family brick apartment house.

Painting. Same as 18-family brick apartment house.

ELECTRIC WIRING - Same as 18-family brick apartment house.

MECHANICAL EQUIPMENT

Each apartment is to be equipped with one 4-burner side oven gas stove with automatic oven regulator; one 6-cubic-foot electric refrigerator; and one In-a-Door or Roll-Away bed. The building is to be provided with 5 Kerner incinerators, each incinerator to have a refuse door installed in the wall of the building at the proper height above the first, second and third floor service stair landings.

TECHNICAL FLOOR PLAN





COMMERCIAL BUILDING - NO BASEMENT

Content: 115,850 cubic feet
8,075 square feet

DESCRIPTIVE SPECIFICATIONS BRICK COMMERCIAL BUILDING

GENERAL CONDITIONS

Materials, Labor, Appliances. Unless otherwise specified herein, the contractor shall provide and pay for all materials, labor, water, tools, equipment, permits, light and power necessary for the completion of the Wenzlick commercial building. Unless otherwise specified, all materials shall be sound, new and of good quality and all work shall be done in a skillful and workmanlike manner.

PREPARATION OF SITE AND EXCAVATION

The contractor shall clear the site of all trees, brush, etc. The excavation shall be of sufficient area and depth to accommodate the footings of the building. The ground to be enclosed by the foundation walls shall be leveled to receive a 3" cinder bed. Any surplus material not required to grade the plot as indicated by plans shall be removed from the premises and the shortage of materials shall be furnished by the contractor.

Rock excavation is not included in this contract. The contractor will be paid an additional price per cubic foot for rock removal as specified in his bid.

CONCRETE FOOTINGS, FOUNDATIONS AND FLOOR

Footings and foundation walls shall be installed to dimensions indicated on the plans. The mixture shall be one (1) part Portland Cement, three (3) parts clean sharp sand, five (5) parts broken stone, trap-rock, gravel or other suitable clean coarse aggregate, graded in size to pass through a 2" screen, adequately mixed with a sufficient amount of clean water in a mechanical batch mixer, placed in the forms within one-half hour thereafter. Substantial and tight forms shall be built on both inner and outer surface foundations of the walls. No part of the excavation wall shall be used as a form.

Reinforcing rods are to be placed in the foundation and footings as indicated on the detailed plans.

The floor of the building is to be 1:3:5 concrete poured over a 3" cinder bed. The concrete floor is to be 5" thick and is to be reinforced by 6 x 6 steel mesh.

BRICKWORK AND MASONRY ITEMS

Exterior walls are to be 13" variegated matt brick laid in Flemish bond and backed with common brick. The rear wall of the building is to be faced with common brick.

Interior partitions are to be curtain walls of 4" gypsum block.

STRUCTURAL STEEL

Structural steel work shall be 8 x 6 "H" columns supporting 10" "I" beams as indicated on the structural steel plans. Ceiling joists are to be 16" steel bar joists set on 54" centers. 2 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 1/4" angle iron 4 feet long shall form the lintel over each door and window in the rear wall.

PLASTERING

Contractor shall provide for 3-coat plastering of gypsum block partitions. The scratch coat shall be one (1) part lime putty and two (2) parts sand with proper proportions of fiber and sand added. The brown coat shall be one (1) part lime putty to three (3) parts sand, and the finish coat shall be one (1) part hard wall plaster to two (2) parts of hydrated lime. The ceilings shall be plastered three (3) coats over expanded metal lath, the first two coats to be the same as those placed on the walls. The finished coat of the ceilings shall be acoustical plaster.

**ROUGH CARPENTRY
AND FRAMING MATERIAL**

Rough carpentry and framing material shall be the best grade provided in local practice. It may be yellow pine, white pine, fir or hemlock. All material shall be of sizes indicated.

Roof rafters, 2" x 6" - spaced 16" c to c
Studding for gable ends 2 x 4's - spaced 16" c to c

ROOF SHEATHING *

The sheathing over the gable portion of the roof shall be #2 yellow pine dressed and not over 6" wide, securely fastened at each intersection by 2 6d nails. The sheathing over the flat portion of the roof is to be 2" metal edge gypsum plank.

ROOFING

The gable portion of the roof shall be covered with a good grade of variegated slate laid over 15-lb. roofing felt. The gable ends are to be covered with 10" beveled redwood siding. The flat portion of the roof is to be built-up asphalt and felt laid over the 2" metal edge gypsum plank and covered with roofing gravel.

FLASHING - SHEET METAL WORK - Same as 18-family brick apartment house.

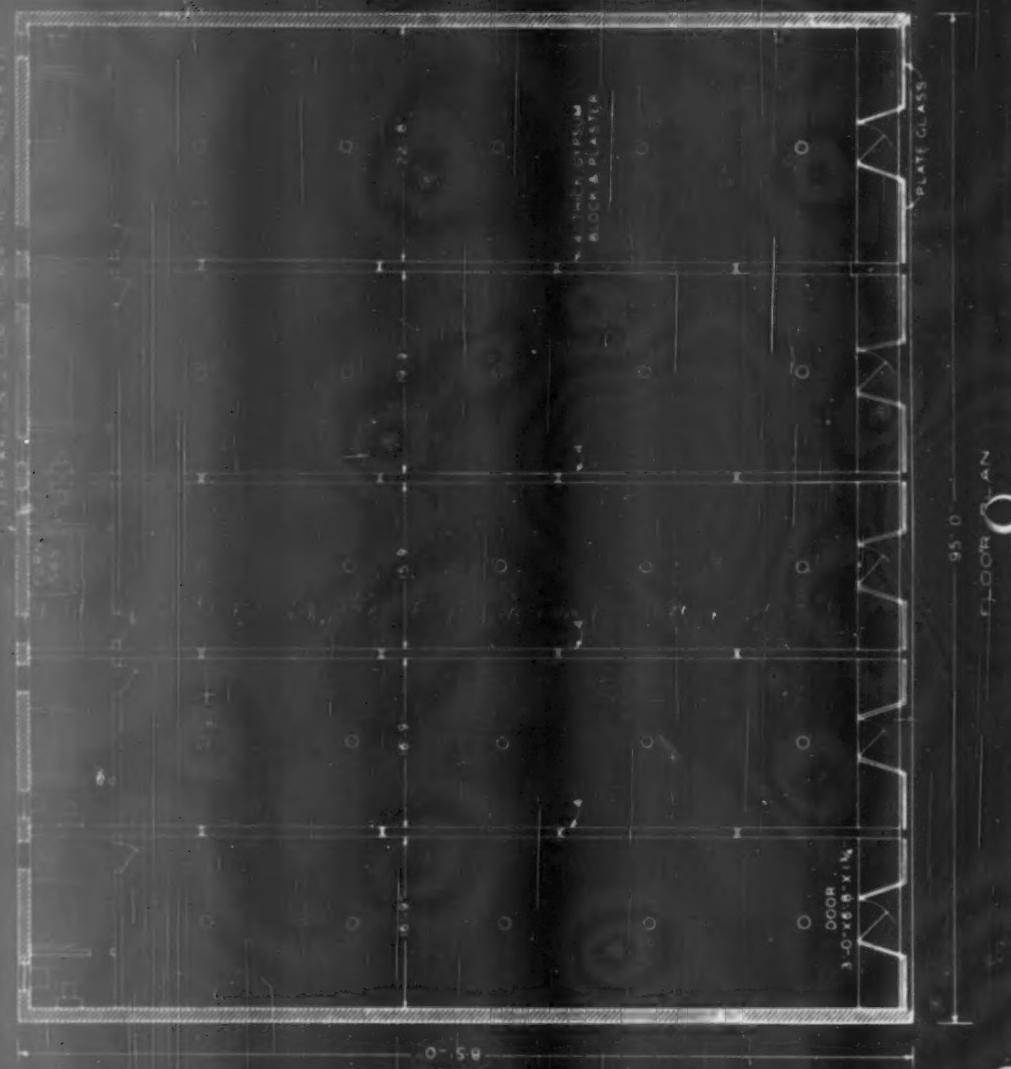
MILLWORK - WINDOW FRAMES AND SASH - Same as 18-family brick apartment house.

MILLWORK - INTERIOR - Same as 18-family brick apartment house.

FINISHED FLOORS

Finished floors shall be of asphalt tile (Johns Manville group B or equivalent) 1/8" thick laid in mastic over the concrete floor.

PAINTING - Same as 18-family brick apartment house.



PLUMBING

This specification contemplates a complete plumbing, drainage and water-supply system for 5 lavatories and 5 toilets.

Sewer Line, Vents and Drainage. House sewer line of 6" shall be carried to a point 50 feet beyond foundation walls. Vent and drainage system shall be installed and tested in accordance with best local practice, municipal code, or requirements of American Society of Sanitary Engineers. All joints shall be filled with oakum and poured lead and well calked. 2" vent and waste lines shall be of genuine galvanized wrought iron. 6" vitrified tile pipe shall be continued beyond the foundation walls for 50 feet and the joints securely set with cement mortar. Plumber shall excavate and backfill all pipe trenches.

Water Supply. A pipe shall be continued 50 feet beyond the foundation walls in separate trench. This shall be laid using 1" copper water tubing with sweat-joint fittings. One-half inch copper tubing with sweat-joint pipe and fitting shall be installed for hot and cold water supply and connected with all plumbing fixtures and boiler. (Water closets and boiler shall be provided with cold-water supply only.) All pipe and fitting shall be installed in accordance with manufacturer's instructions.

Fixtures. There shall be furnished and installed to the rough connections here provided fixtures of quality equal to those specified in the following list: (The following list covers items manufactured by the Independent Plumbing and Heating Company. Contractor is permitted to substitute any equal combination.)

- 5 - Knight Pedestal Lavatories 20" x 24" over all #224
- 5 - Colonial Vitreous China Toilets with white ivoryette seat #344

Hot Water Supply. A water heater is not provided under these specifications. It is to be provided under separate order on selection by the owner.

Alternates. Same as 18-family brick apartment house.

HEATING PLANT

The purpose of this specification is to describe complete installation of 5 gas-fired forced warm air furnaces. Furnaces are to be three 80GH, one DL2100 and one DL3125 Front Rank furnaces or equivalent. Duct work and registers are to be provided in the manner indicated on the heating plans. Each furnace shall be tested as required and left complete.

ELECTRIC WIRING - Same as 18-family brick apartment house.

BUILDING COSTS OF A BRICK COMMERCIAL BUILDING BUILT IN SAINT LOUIS

Costs are grouped into four classifications of material, labor of labor and one of overhead. A further breakdown of these groups is given in detail below. Columns of the table are numbered, and a brief description of the items included in each is given in the paragraphs below. Paragraphs are numbered to correspond with the columns described. Building material costs are indicated by the letter **M**, corresponding building items by the letter **L**. No labor items are shown in Column 10, Building Hardware, as they have already been included in Column 5, Millwork.

Group A

- (1) **MANUFACT.** Cement, sand, gravel, acoustical plaster, hydrated lime, welded steel furring, tile for floor and common brick, and salt glazed engine.
- (2) **Tile Work.** Not included in buildings.

Group B

- (3) **Unfinished Lumber.** 1x1 beams, 1x2 columns, nail plates, roof rafters and shingles, and rough siding.
- (4) **Plastered Lumber.** Form lumber, asphalt the flooring, slate roofing, roofing felt, asphalt, roofing gravel, gypsum block and gypsum planks.

Group C

- (5) **Millwork.** Windows, doors, plate glass.

Group D

- (6) **Heating.** Gas-tarred furnaces and metal for short work.

Group E

- (7) **Plumbing.** Soil pipes and fittings, waste pipe and fittings, trap and covers, carburetor, solder strip, lead, tarred oakum, lavatories and toilets.

Group F

- (8) **Sheet Metal.** Gutters, downspouts, flashing, B-X cables, switches, switch boxes, outlet boxes, etc.

Group G

- (9) **Electrical Work.** Main switch box, B-X cables, switches, switch boxes, outlet boxes, etc.

Group H

- (10) **Building Hardware.** Nails, bolts and hardware, etc.

Group I

- (11) **Painting.** White lead, paintbrushes, linseed oil, varnish, shellac, stains, etc.

Group J

- (12) **Miscellaneous.** Metal lath, mineral wool insulation.

Group K

- (13) **Total overhead, profit and other costs.** This item includes overhead and profit of sub-contractors in plastering, metal work, heating, plumbing and electrical work, general contractor's profit, and Missouri sales tax (now 3% on materials), old age and unemployment tax (Federal and State), liability and employees' compensation insurance, fire and life risks insurance, and completion bond.

TOTAL CONSTRUCTION COST

GROUP E														
GROUP D				GROUP F				GROUP G				GROUP H		
Year	M	L	M	M	L	M	L	M	L	M	L	M	L	
1939	\$23,511	\$23,119	\$21,09	\$16,030	\$10,046	\$2,222	\$4,460	\$4,971	\$2,521	\$5,58	\$3,34	\$1,45	\$7,3	
Ju 1940	23,232	23,794	24,991	64,5	20,48	262	625	206	776	510	426	255	69	
Ag 1940	23,512	23,745	26,085	64,5	27,71	262	625	206	776	510	421	255	69	
O 1940	23,512	23,745	26,087	64,5	29,71	262	625	206	776	510	421	255	69	
Ju 1941	23,512	23,745	27,114	64,5	30,8	262	625	206	776	510	421	255	69	
Ag 1941	24,114	27,744	27,111	747	32,111	230	645	230	769	581	412	317	74	
O 1941	24,666	28,117	32,044	857	31,40	344	603	206	731	581	420	226	106	
Ju 1941	25,048	43,748	929	30,74	372	706	289	791	933	452	343	126	55	
Ag 1942	24,54	30,98	930	32,41	376	706	289	791	933	474	346	73	55	
O 1942	23,92	30,98	27,779	930	32,50	376	714	289	791	933	462	346	73	
Ju 1942	25,11	30,98	31,112	983	32,50	380	714	286	791	933	462	346	73	
Ag 1942	25,55	26,65	34,555	853	32,52	340	714	259	769	933	462	296	67	
O 1943	25,57	27,30	24,77	781	34,47	307	778	232	817	581	463	298	67	
Ju 1943	25,57	27,30	24,77	781	32,75	307	778	232	817	581	463	298	67	
Ag 1943	25,57	27,30	24,77	781	32,75	307	778	232	817	581	463	298	67	
O 1943	26,23	30,67	24,64	781	32,78	307	791	232	817	581	463	317	67	
Ju 1943	26,23	30,67	24,64	781	32,78	307	791	232	817	581	463	317	67	
Ag 1943	26,23	31,09	24,55	781	32,52	307	714	232	819	581	463	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ag 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
O 1943	26,23	31,09	24,55	781	34,47	307	714	232	819	581	462	298	67	
Ju 1943	26,23	31,09	24,55</td											

Ja 1947	4316	5291	2215	1604	4806	849	1103	508	1101	871	644	639	122	55	124	150	114	68	116	402	460	15236	16342	7348	22945	24.9	4.06
Ap 1947	4682	5291	2221	1604	4880	849	1113	508	1114	871	635	639	122	55	124	150	131	88	116	402	460	15318	16342	7367	33027	28.5	4.09
Jl 1947	4795	5291	2234	1604	4560	649	1113	508	1114	871	653	639	130	55	128	150	131	84	116	402	460	15362	16342	7360	33095	28.6	4.10
O 1947	4806	5291	2241	1604	4583	649	1112	508	1219	871	639	136	55	128	150	133	83	116	402	460	153702	16342	7378	33622	29.0	4.16	
S 1948	5144	5514	2277	1659	4212	663	1205	516	1205	871	644	716	136	53	144	160	126	82	121	457	460	15930	16319	7654	24319	29.6	4.25
Ja 1948	5167	5514	2286	1659	4549	663	1280	516	1310	871	650	716	126	56	144	160	126	82	121	457	460	16398	16735	7744	24612	20.1	4.31
Ap 1948	5198	6081	2286	1659	4549	663	1148	516	1318	871	636	834	126	56	145	160	136	90	121	457	460	16339	16735	7746	24636	33.7	4.63
Jl 1948	5343	7432	2286	2521	4892	663	1148	516	1415	871	906	716	145	76	160	136	90	121	452	465	18977	16666	13963	28936	33.7	4.63	
Ja 1949	5426	8176	2443	5014	4848	5232	1300	772	1695	1134	916	839	163	111	132	259	150	95	177	493	898	17807	17918	12784	46409	40.1	5.75
F 1949	5466	8176	2443	5014	4848	5232	1305	772	1695	1134	916	839	163	111	131	259	150	95	177	493	898	17911	17918	12783	46414	40.1	5.75
M 1949	5466	8176	2443	5014	4848	5232	1305	772	1695	1134	916	839	163	111	131	259	150	95	177	493	898	17911	17918	12783	46414	40.1	5.75
Ap 1949	5466	8176	2531	2531	4863	1031	1305	772	1695	1134	824	839	155	111	131	259	150	95	177	524	898	17946	17948	15710	465063	39.6	5.88
M 1949	5466	8176	2531	2531	4863	1031	1291	772	1695	1134	824	839	155	111	131	259	150	94	177	524	898	17946	17948	15710	465063	39.6	5.88
Jl 1949	5466	8176	2537	2537	4860	1031	1291	772	1695	1134	829	839	155	111	131	259	150	94	177	524	898	17945	17948	15710	465063	39.6	5.88
Je 1949	5457	8176	2537	2537	4860	1031	1291	772	1695	1134	762	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
Ja 1949	5457	8176	2532	2523	4488	1031	1291	772	1695	1134	782	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
At 1949	5457	8176	2532	2523	4488	1031	1291	772	1695	1134	810	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
S 1949	5457	8176	2532	2523	4488	1031	1291	772	1695	1134	810	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
F 1949	5457	8176	2532	2523	4488	1031	1291	772	1695	1134	810	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
O 1949	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	810	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
N 1949	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	810	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
D 1949	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	801	839	155	111	131	259	150	94	177	503	898	17270	17270	12863	45651	4.4	5.68
Ja 1950	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	801	839	155	111	131	259	150	94	177	503	898	17274	17274	12863	45724	30.5	5.68
At 1950	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	801	839	155	111	131	259	150	94	177	503	898	17274	17274	12863	45724	30.5	5.68
M 1950	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	801	839	155	111	131	259	150	94	177	503	898	17274	17274	12863	45724	30.5	5.68
Ap 1950	5457	8176	2535	2535	4816	1031	1291	772	1695	1134	801	839	155	111	131	259	150	94	177	503	898	17274	17274	12863	45724	30.5	5.68
My 1950	5644	8176	2569	2569	4892	1044	1204	787	1599	1134	771	839	155	111	131	259	150	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1950	5644	8176	2569	2569	4892	1044	1204	787	1599	1134	771	839	155	111	131	259	150	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Jl 1950	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
At 1950	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
S 1950	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
O 1950	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
S 1950	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ap 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
My 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
At 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
S 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
O 1951	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ap 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
My 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
At 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
S 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
O 1952	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ja 1953	5644	8176	2573	2573	4956	1044	1204	787	1599	1134	785	839	155	111	131	259	151	94	177	503	898	17825	17825	15710	465982	30.9	5.72
Ap 1953</																											